FIG.1

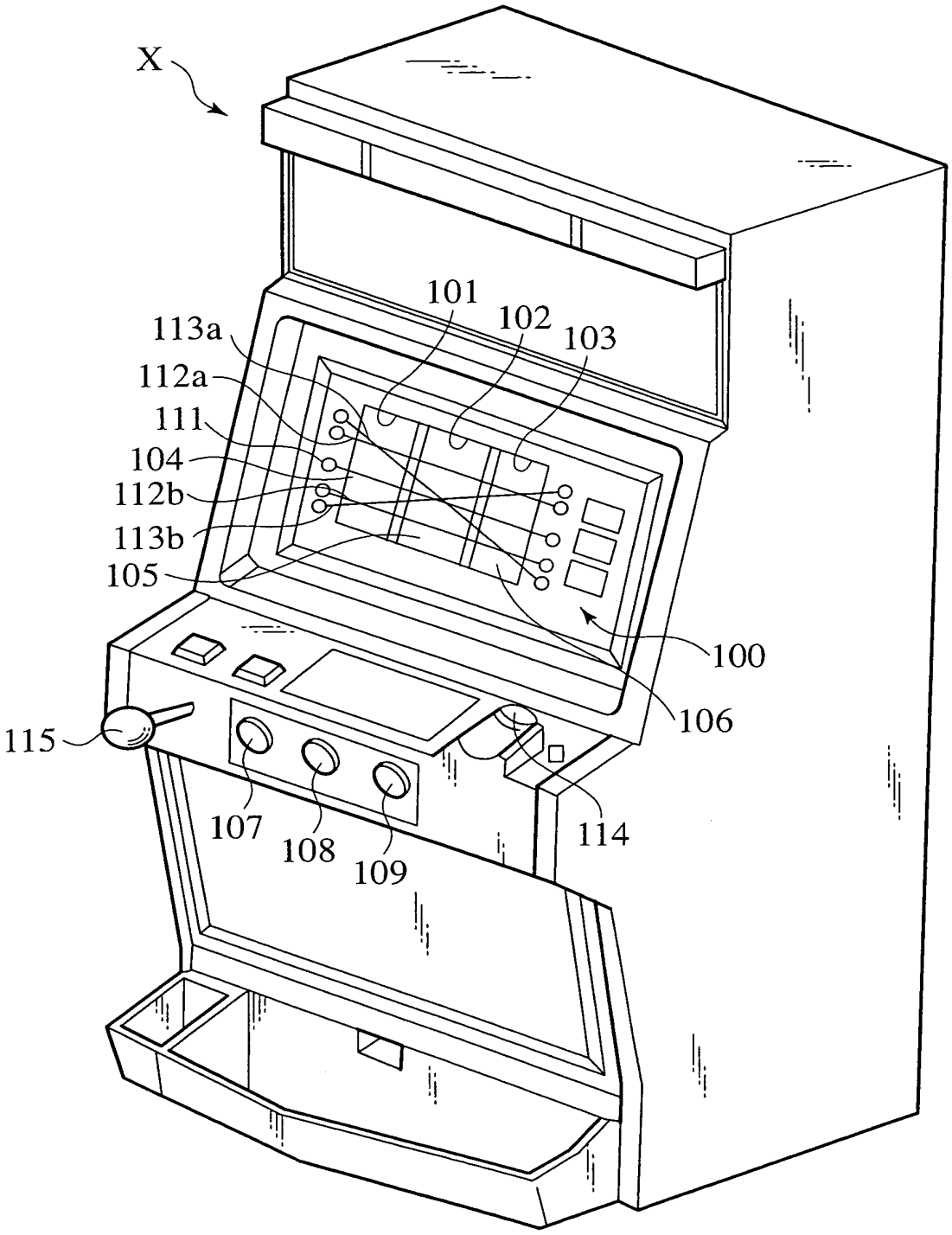

X
101
102
103
113a
112a
111
104
112b
113b
105
100
106
115
107
108
109
114

FIG.2

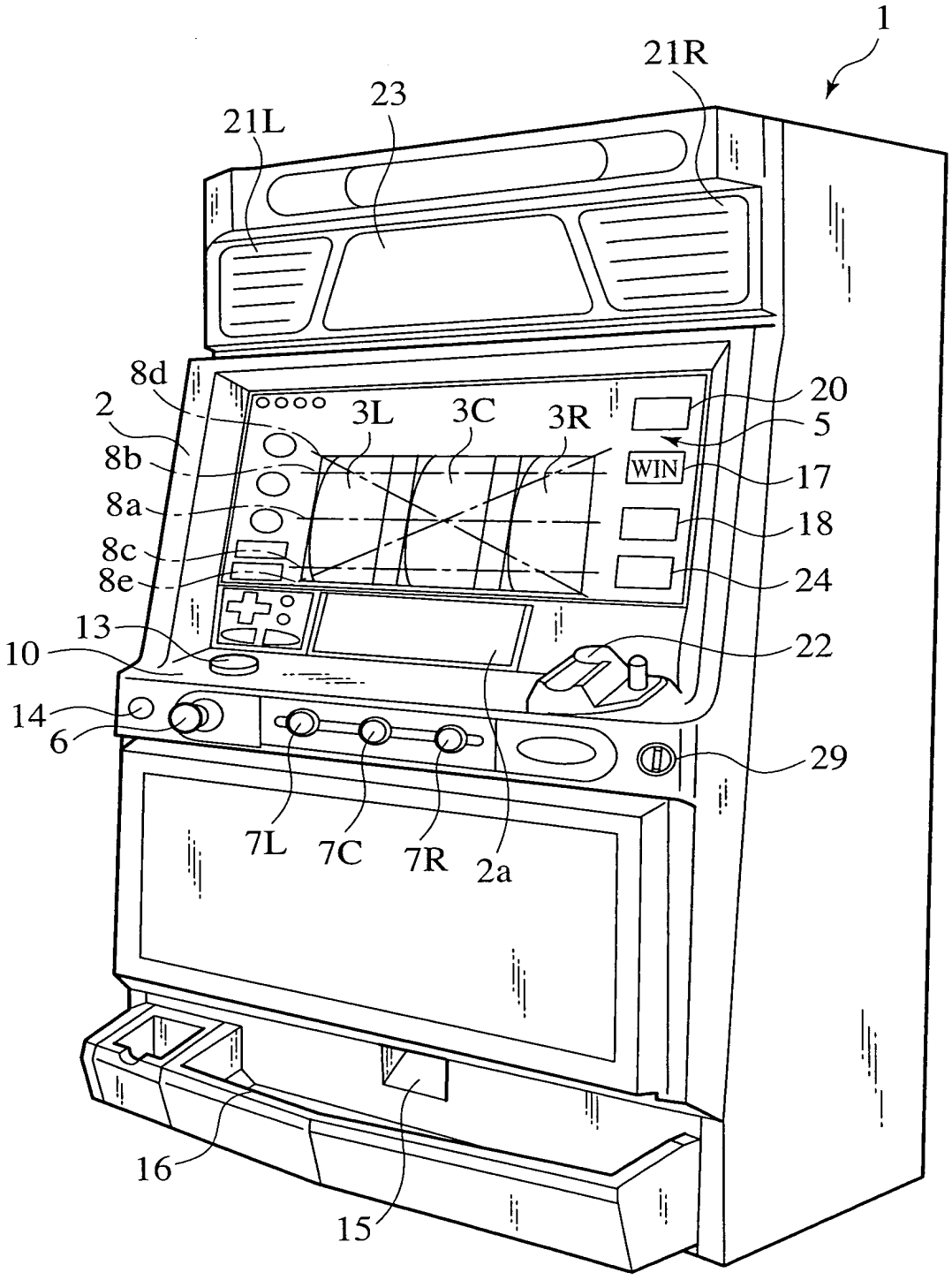

1
21R
23
21L
8d
2
3L
3C
3R
20
5
8b
WIN
17
8a
18
8c
24
8e
13
22
10
14
6
29
7L
7C
7R
2a
16
15

FIG.3

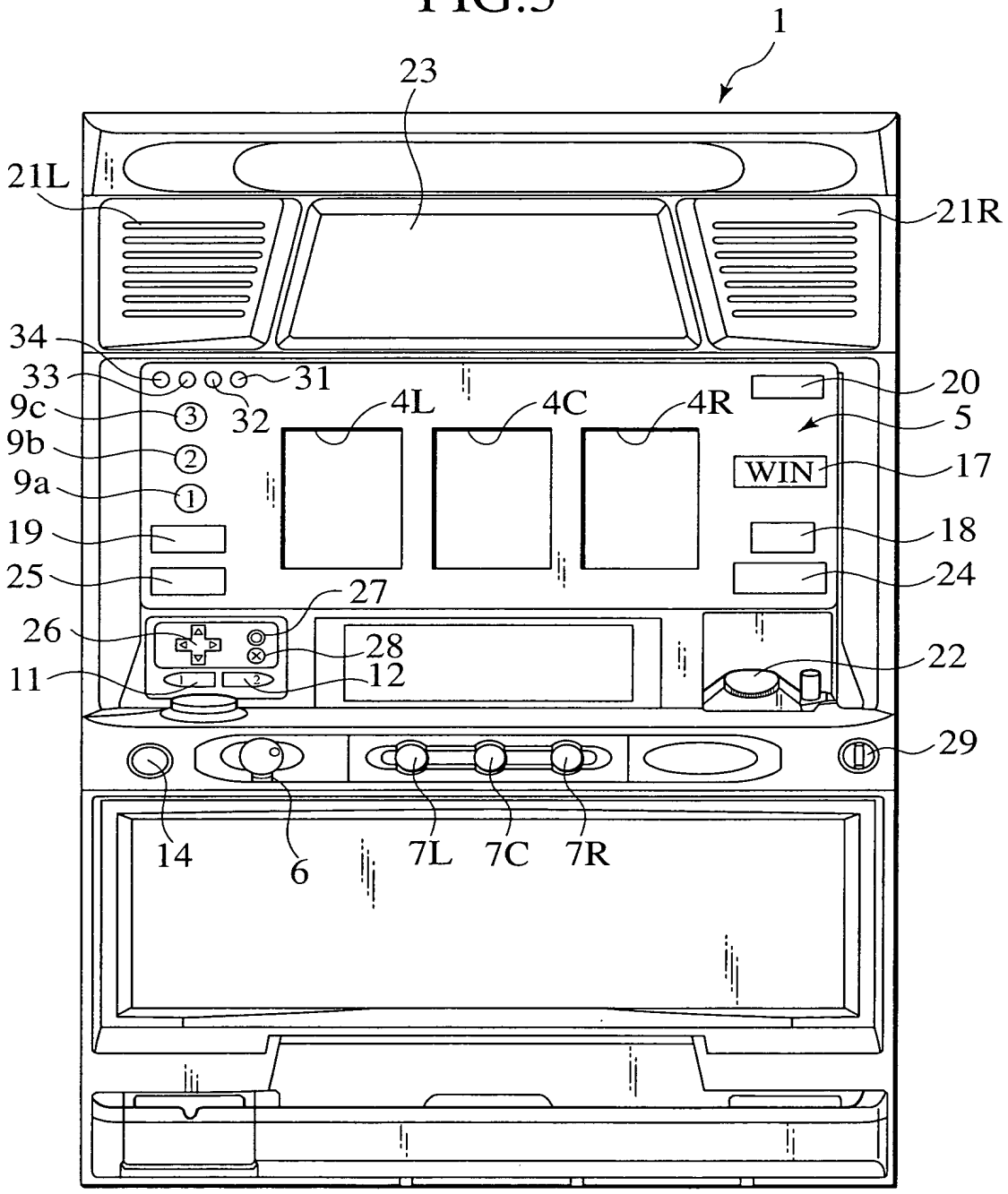

1
23
21L
21R
34
33
31
32
9c
9b
9a
4L
4C
4R
20
5
WIN
17
19
18
25
24
27
26
28
11
12
22
29
14
6
7L
7C
7R

FIG.4

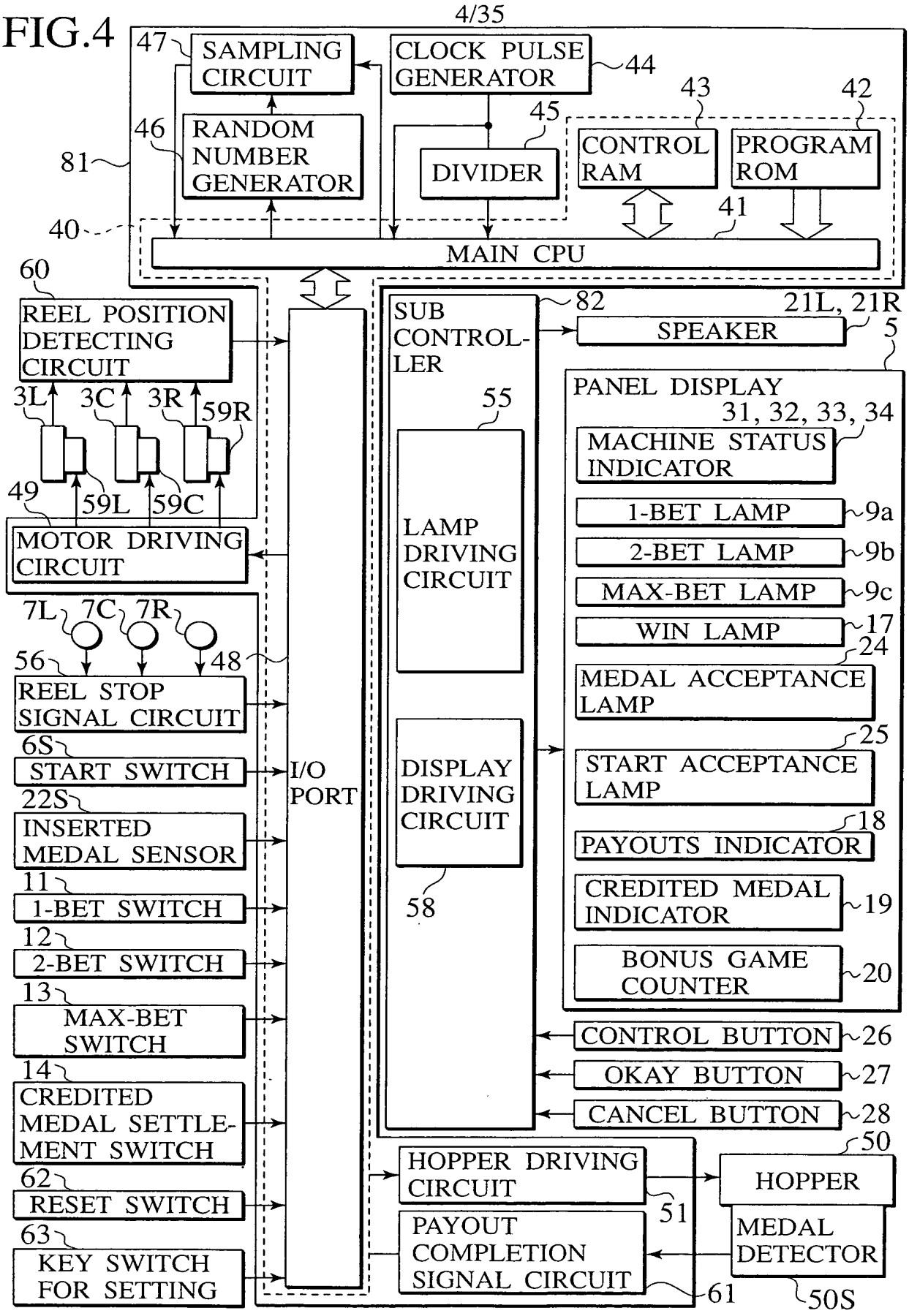

4/35
47
SAMPLING CIRCUIT
CLOCK PULSE GENERATOR
44
43
42
45
46
RANDOM NUMBER GENERATOR
81
DIVIDER
CONTROL RAM
PROGRAM ROM
41
40
MAIN CPU
60
REEL POSITION DETECTING CIRCUIT
3L
3C
3R
59R
49
59L
59C
MOTOR DRIVING CIRCUIT
7L
7C
7R
48
56
REEL STOP SIGNAL CIRCUIT
6S
START SWITCH
22S
INSERTED MEDAL SENSOR
11
1-BET SWITCH
12
2-BET SWITCH
13
MAX-BET SWITCH
14
CREDITED MEDAL SETTLE-MENT SWITCH
62
RESET SWITCH
63
KEY SWITCH FOR SETTING
I/O PORT
SUB CONTROL-LER
82
21L, 21R
SPEAKER
5
55
LAMP DRIVING CIRCUIT
DISPLAY DRIVING CIRCUIT
58
PANEL DISPLAY
31, 32, 33, 34
MACHINE STATUS INDICATOR
1-BET LAMP
9a
2-BET LAMP
9b
MAX-BET LAMP
9c
WIN LAMP
17
24
MEDAL ACCEPTANCE LAMP
25
START ACCEPTANCE LAMP
18
PAYOUTS INDICATOR
CREDITED MEDAL INDICATOR
19
BONUS GAME COUNTER
20
CONTROL BUTTON
26
OKAY BUTTON
27
CANCEL BUTTON
28
50
HOPPER DRIVING CIRCUIT
HOPPER
51
PAYOUT COMPLETION SIGNAL CIRCUIT
MEDAL DETECTOR
61
50S

FIG.5

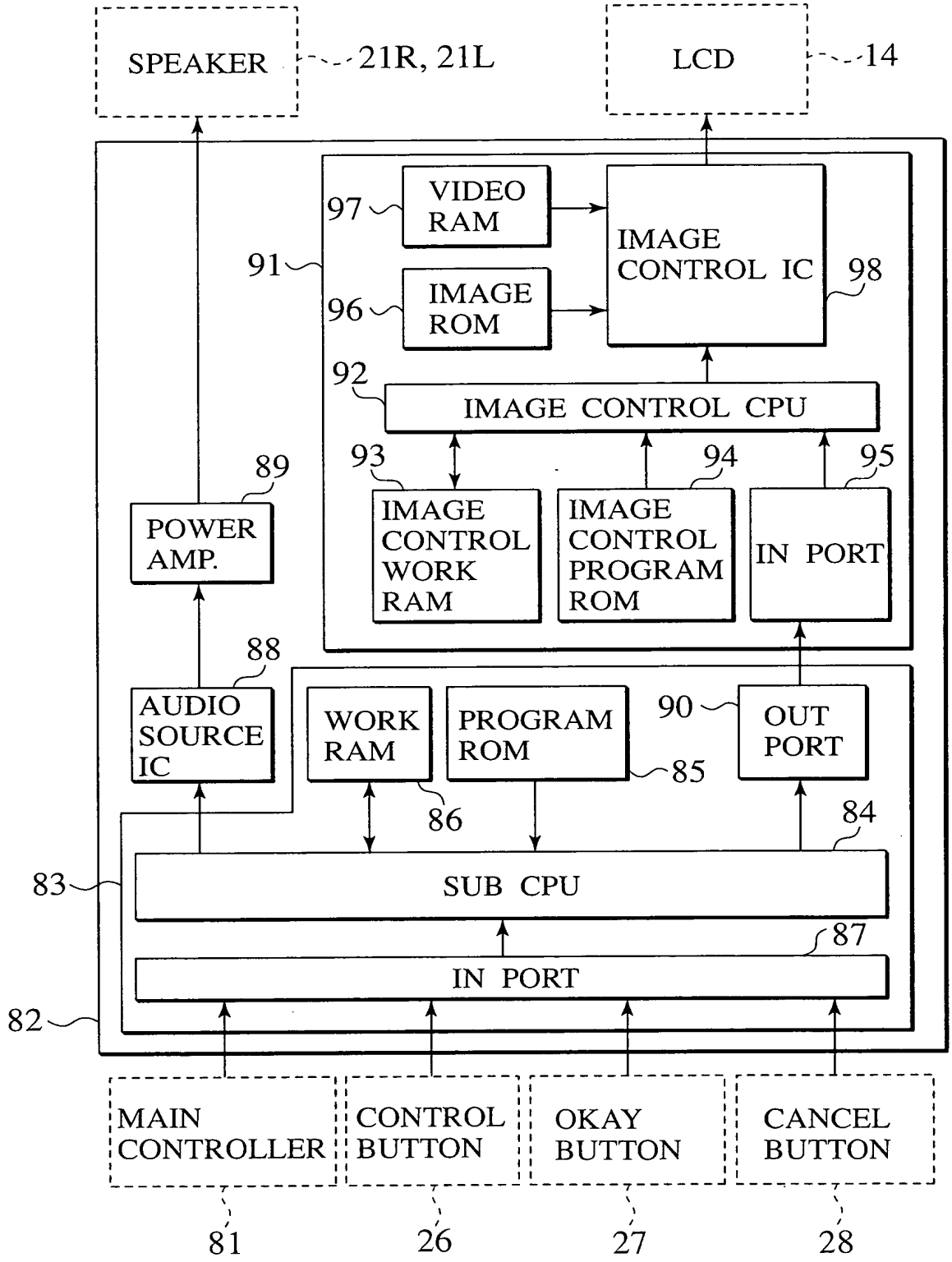

SPEAKER
21R, 21L
LCD
14
97
VIDEO RAM
91
96
IMAGE ROM
IMAGE CONTROL IC
98
92
IMAGE CONTROL CPU
93
94
95
89
POWER AMP.
IMAGE CONTROL WORK RAM
IMAGE CONTROL PROGRAM ROM
IN PORT
88
AUDIO SOURCE IC
WORK RAM
PROGRAM ROM
90
OUT PORT
85
86
84
83
SUB CPU
87
IN PORT
82
MAIN CONTROLLER
CONTROL BUTTON
OKAY BUTTON
CANCEL BUTTON
81
26
27
28

FIG.6

	LEFT REEL	CENTER REEL	RIGHT REEL
00	RED 7	RED 7	RED 7
01	CHERRY	PLUM	BELL
02	BLUE 7	REPLAY	REPLAY
03	BELL	BELL	BAR
04	REPLAY	CHERRY	PLUM
05	RED 7	REPLAY	BELL
06	CHERRY	CHERRY	REPLAY
07	BLUE 7	BELL	CHERRY
08	BELL	BAR	BLUE 7
09	REPLAY	CHERRY	CHERRY
10	PLUM	REPLAY	BELL
11	BELL	BELL	REPLAY
12	REPLAY	BLUE 7	CHERRY
13	BAR	REPLAY	PLUM
14	RED 7	CHERRY	BELL
15	BELL	BELL	REPLAY
16	PLUM	BAR	CHERRY
17	REPLAY	PLUM	BLUE 7
18	PLUM	REPLAY	BELL
19	BELL	BELL	REPLAY
20	REPLAY	CHERRY	CHERRY

FIG.7

PRIZES TO BE AWARDED AND THE NUMBER OF MEDALS TO BE PAID OUT CORRESPONDING TO WINNING SYMBOL COMBINATIONS

SYMBOL COMBINATION	NORMAL GAME STATE	NORMAL GAME STATE IN BB STATE	RB GAME STATE
RED 7-RED 7-RED 7	BB 15 pc.	—	—
BLUE 7-BLUE 7-BLUE 7	BB 15 pc.	—	—
BAR-BAR-BAR	RB 15 pc.	—	—
BELL-BELL-BELL	BELL PRIZE 15 pc.	BELL PRIZE 15 pc.	—
PLUM-PLUM-PLUM	PLUM PRIZE 6 pc.	PLUM PRIZE 6 pc.	—
REPLAY-REPLAY-REPLAY	REPLAY 0 pc.	RB (JAC IN) 15 pc.	15 pc.
CHERRY-ANY-ANY	CHERRY PRIZE 2 OR 4 pc.	CHERRY PRIZE 2 OR 4 pc.	—

FIG.8

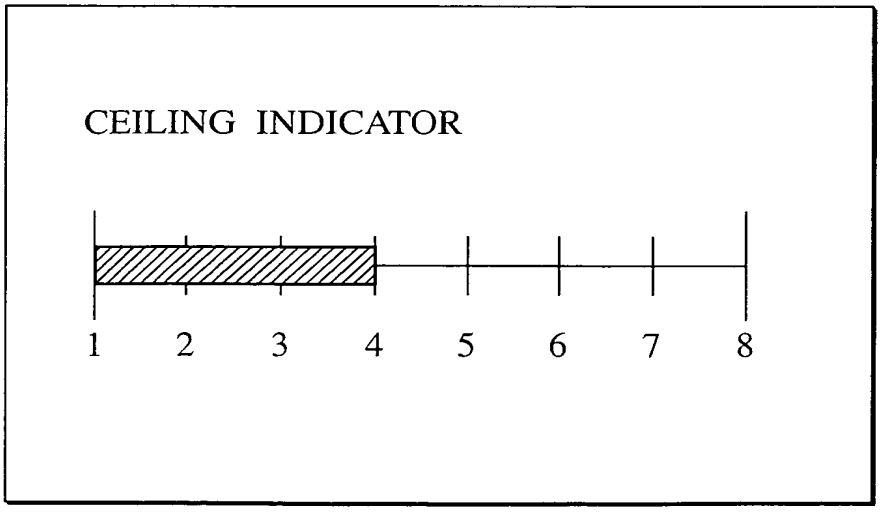
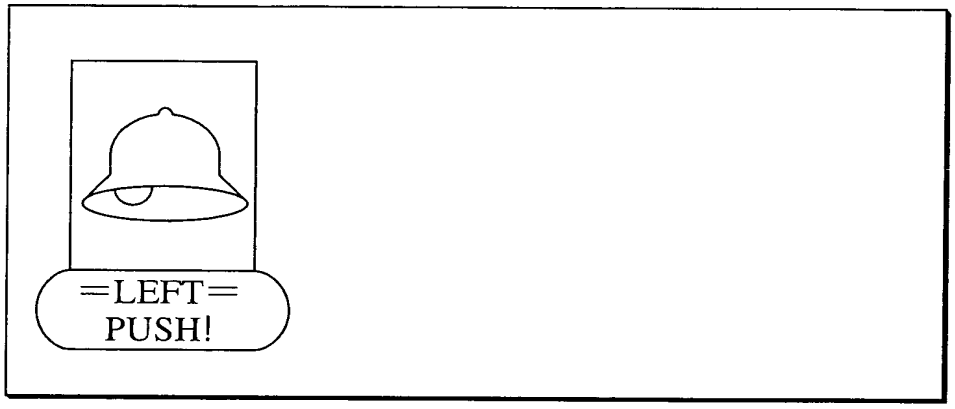
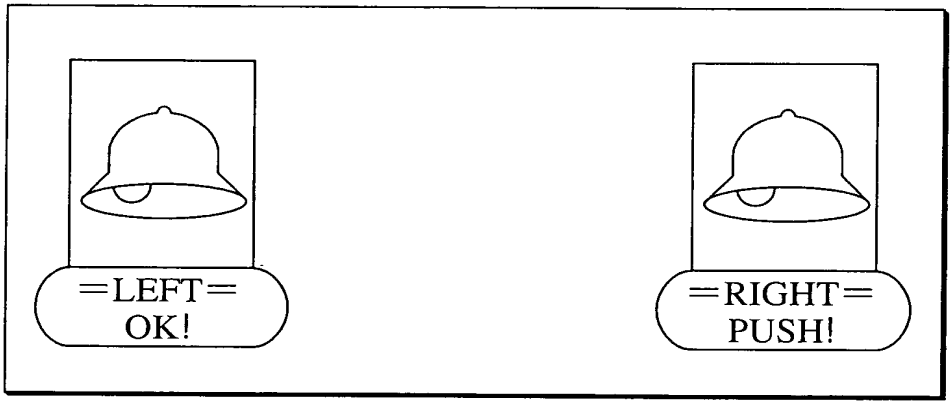


FIG.9

(1) PICTURE NOTIFYING TO PUSH LEFT STOP BUTTON



(2) PICTURE NOTIFYING TO PUSH RIGHT STOP BUTTON



(3) PICTURE NOTIFYING TO PUSH CENTER STOP BUTTON

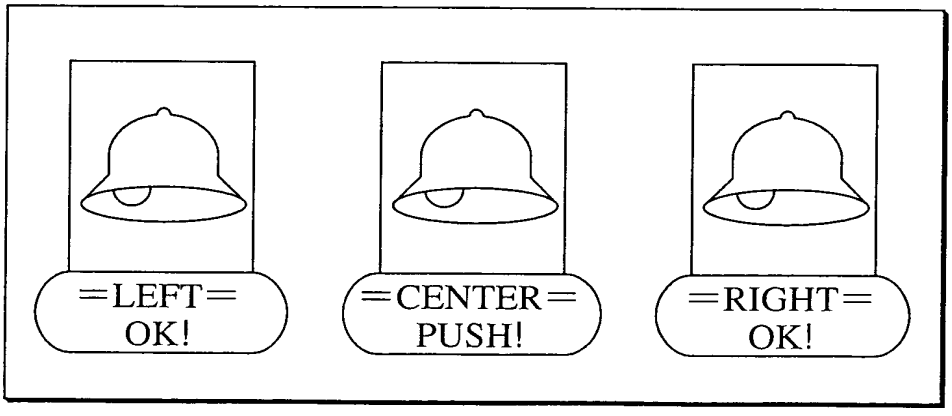


FIG.10A

PROBABILITY SAMPLING TABLE USED UNDER NORMAL GAME STATE (RANDOM NUMBER RANGE : 0～16383)

PRIZES	RANDOM NUMBER RANGE TO BE AWARDED No. OF BET = 3	INTERNALLY WINNING PROBABILITY
BB	0～54	55/16384
RB	55～82	28/16384
REPLAY	83～2327	2245/16384
BELL PRIZE	2328～10919	8592/16384
PLUM PRIZE	10920～10973	54/16384
CHERRY PRIZE	10974～11036	63/16384

FIG.10B

PROBABILITY SAMPLING TABLE USED UNDER NORMAL GAME STATE IN BB STATE (RANDOM NUMBER RANGE : 0～16383)

PRIZES	RANDOM NUMBER RANGE TO BE AWARDED No. OF BET = 3	INTERNALLY WINNING PROBABILITY
BB	— ～ —	0/16384
RB	— ～ —	0/16384
REPLAY (RB IN BB)	0～4199	4200/16384
BELL PRIZE	4200～14499	10300/16384
PLUM PRIZE	14500～16319	1820/16384
CHERRY PRIZE	— ～ —	0/16384

FIG.11

STOPPING CONTROL TABLE NUMBER SELECTION TABLE

(RANDOM NUMBER RANGE : 0～255)

TABLE No.	RANDOM NUMBER RANGE TO BE AWARDED No. BET = 3	SELECTION PROBABILITY
No.1	0～42	43/256
No.2	43～85	43/256
No.3	86～128	43/256
No.4	129～171	43/256
No.5	172～213	42/256
No.6	214～255	42/256

FIG.12

RELATIONSHIP BETWEEN ORDER OF OPERATION AND WINNING OF BELL PRIZE

		TABLE No.					
		1	2	3	4	5	6
ORDER OF REEL STOPS	L-C-R	W	L	L	L	L	L
	L-R-C	L	W	L	L	L	L
	C-L-R	L	L	W	L	L	L
	C-R-L	L	L	L	W	L	L
	R-L-C	L	L	L	L	W	L
	R-C-L	L	L	L	L	L	W

W : WIN (TO BE AWARDED)
L : LOSE (NOT TO BE AWARDED)

FIG.13

STOPPING CONTROL TABLE (PRIZE TO BE AWARDED)
[INTERNALLY WINNING PRIZE : BELL PRIZE]

LEFT REEL		CENTER REEL		RIGHT REEL	
POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION	POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION	POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION
00	19	00	19	00	18
01	19	01	19	01	01
02	19	02	19	02	01
03	03	03	03	03	01
04	03	04	03	04	01
05	03	05	03	05	05
06	03	06	03	06	05
07	03	07	07	07	05
08	08	08	07	08	05
09	08	09	07	09	05
10	08	10	07	10	10
11	11	11	11	11	10
12	11	12	11	12	10
13	11	13	11	13	10
14	11	14	11	14	14
15	15	15	15	15	14
16	15	16	15	16	14
17	15	17	15	17	14
18	15	18	15	18	18
19	19	19	19	19	18
20	19	20	19	20	18

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FIG.14 STOPPING CONTROL TABLE (PRIZE MISSED / FOR REGULAR-ORDER PUSHING AND CENTER-START PUSHING) [INTERNALLY WINNING PRIZE : BELL PRIZE]

LEFT REEL		CENTER REEL		RIGHT REEL	
POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION	POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION	POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION
00	19	00	19	00	19
01	19	01	19	01	19
02	19	02	19	02	02
03	03	03	03	03	02
04	03	04	03	04	02
05	03	05	03	05	02
06	03	06	03	06	06
07	03	07	07	07	06
08	08	08	07	08	06
09	08	09	07	09	06
10	08	10	07	10	06
11	11	11	11	11	11
12	11	12	11	12	11
13	11	13	11	13	11
14	11	14	11	14	11
15	15	15	15	15	15
16	15	16	15	16	15
17	15	17	15	17	15
18	15	18	15	18	15
19	19	19	19	19	19
20	19	20	19	20	19

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FIG.15 STOPPING CONTROL TABLE (PRIZE MISSED / FOR REVERSE ORDER PUSHING) [INTERNALLY WINNING PRIZE : BELL PRIZE]

LEFT REEL		CENTER REEL		RIGHT REEL	
POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION	POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION	POSITION WHEN STOP BUTTON IS PUSHED	CONTROLLED STOP POSITION
00	20	00	19	00	18
01	20	01	19	01	01
02	20	02	19	02	01
03	20	03	03	03	01
04	04	04	03	04	01
05	04	05	03	05	05
06	04	06	03	06	05
07	04	07	07	07	05
08	04	08	07	08	05
09	09	09	07	09	05
10	09	10	07	10	10
11	09	11	11	11	10
12	12	12	11	12	10
13	12	13	11	13	10
14	12	14	11	14	14
15	12	15	15	15	14
16	12	16	15	16	14
17	17	17	15	17	14
18	17	18	15	18	18
19	17	19	19	19	18
20	20	20	19	20	18

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FIG.16A

TABLE FOR CEILING-AT QUANTITY SELECTION

QTY.	VALUE
1	2356
2	1512
5	196
10	28
30	4

FIG.16B

TABLE FOR CEILING-AT IMPLEMENTATION SAMPLING

	VALUE
IMPLEMENT	32
STOCK	224

FIG.17A

TABLE FOR CEILING
START-VALUE SELECTION

PIECES	SAMPLED VALUE
1200	64
1500	128
1800	64

FIG.17B

TABLE FOR TRANSITION TO CEILING

		1200 pc.	1500 pc.	1800 pc.
LEVEL OF CEILING	LEVEL 1	150	188	225
	LEVEL 2	300	375	450
	LEVEL 3	450	563	675
	LEVEL 4	600	750	900
	LEVEL 5	750	938	1125
	LEVEL 6	900	1125	1350
	LEVEL 7	1050	1313	1575
	LEVEL 8	1200	1500	1800

FIG.18

START COMMANDS

1	INTERNALLY WINNING PRIZE
2	BB
	RB
	REPLAY
	BELL
	PLUM
	CHERRY
	MISSED
	—
3	GAME STATE
4	NORMAL GAME STATE
	BB INTERNALLY AWARDED
	RB INTERNALLY AWARDED
	BB IN PROGRESS
	RB IN PROGRESS
	—
	—
	—
5	STOPPING CONTROL TABLE
6	TABLE No. 1
	TABLE No. 2
	TABLE No. 3
	TABLE No. 4
	TABLE No. 5
	TABLE No. 6
	—
	—

BB COMPLETION COMMANDS

1	STATE AT BB COMPLETION
2	GAME RE-STARTABLE
	SETTLEMENT
	FORCED GAME-OVER
	—
	—
	—
	—
	—

FIG.19

WINNING COMMANDS

1	PRIZE
2	BB
	RB
	REPLAY
	BELL
	PLUM
	CHERRY
	MISSED
	—
3	GAME STATE
4	NORMAL GAME STATE
	BB INTERNALLY AWARDED
	RB INTERNALLY AWARDED
	BB IN PROGRESS
	RB IN PROGRESS
	—
	—
	—
5	WINNING LINE
6	CENTER
	UPPER
	LOWER
	UPWARD SLANT TO RIGHT
	DOWNWARD SLANT TO RIGHT
	—
	—
	—

MEDAL INSERTION COMMANDS

1	No. OF INSERTED MEDALS
2	1 pc.
	2 pc.
	3 pc.
	—
	—
	—
	—
	—

FIG.20

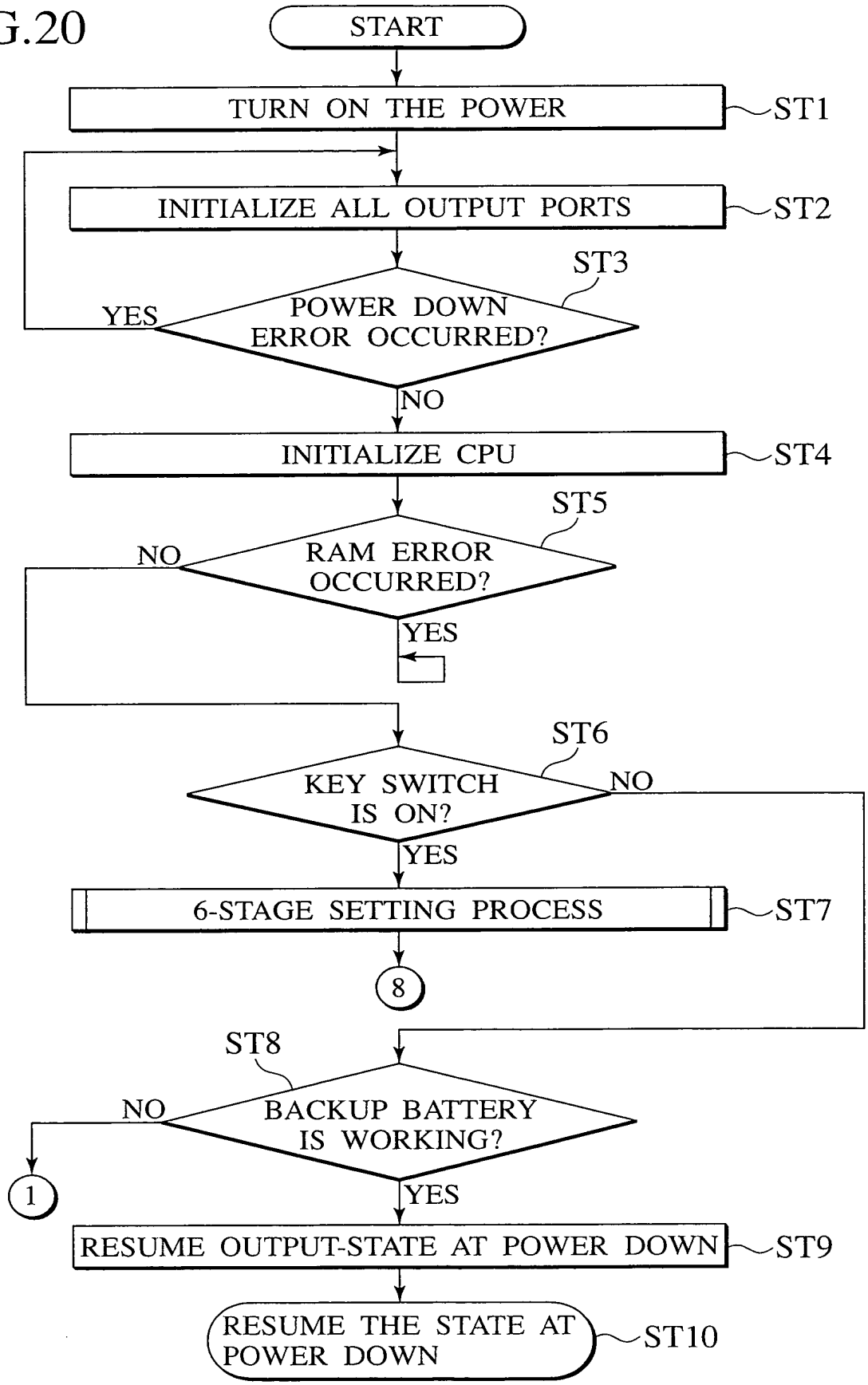
START
TURN ON THE POWER
ST1
INITIALIZE ALL OUTPUT PORTS
ST2
ST3
POWER DOWN ERROR OCCURRED?
YES
NO
INITIALIZE CPU
ST4
ST5
RAM ERROR OCCURRED?
NO
YES
ST6
KEY SWITCH IS ON?
NO
YES
6-STAGE SETTING PROCESS
ST7
8
ST8
BACKUP BATTERY IS WORKING?
NO
YES
1
RESUME OUTPUT-STATE AT POWER DOWN
ST9
RESUME THE STATE AT POWER DOWN
ST10

FIG.21

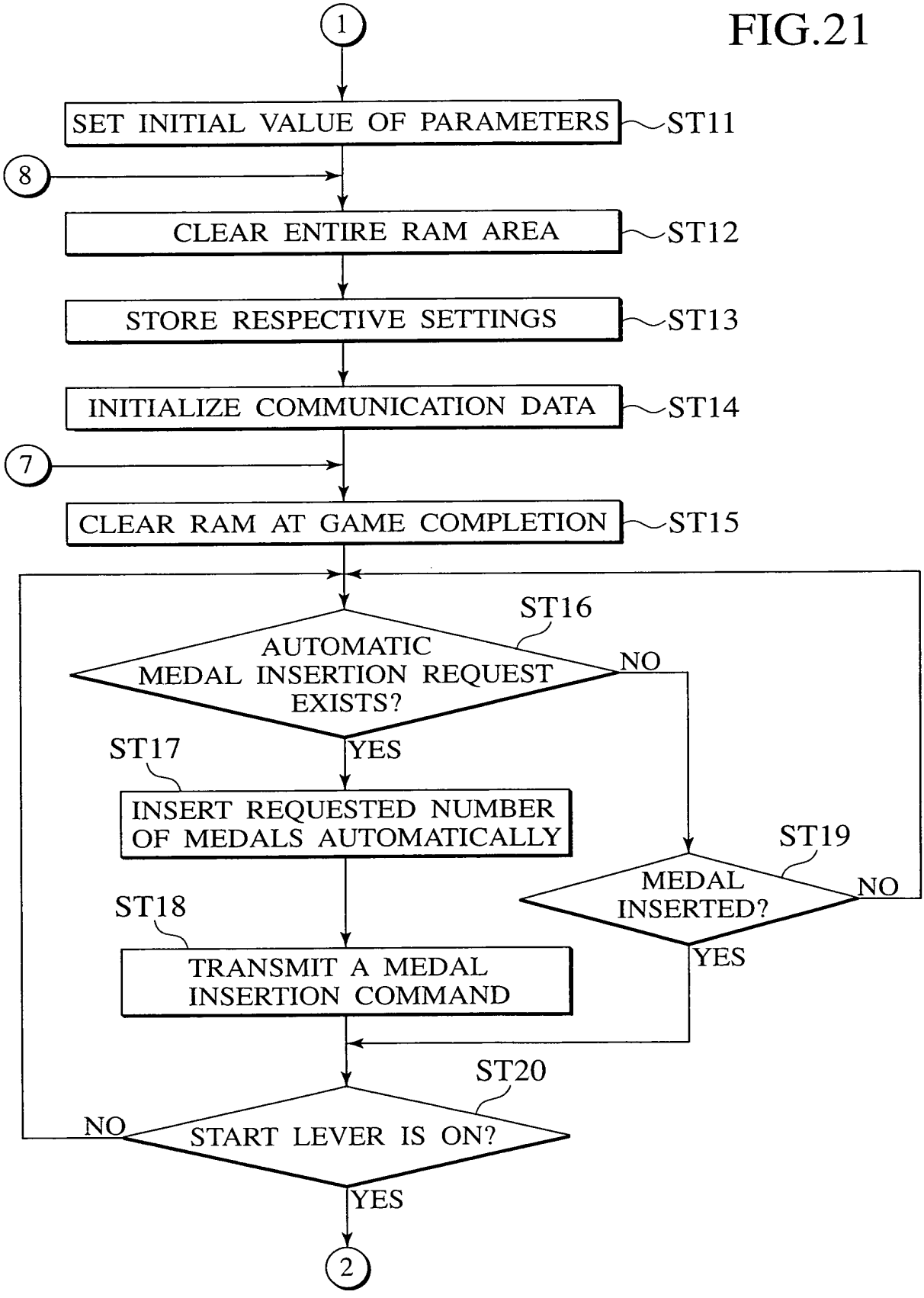
1
SET INITIAL VALUE OF PARAMETERS
ST11
8
CLEAR ENTIRE RAM AREA
ST12
STORE RESPECTIVE SETTINGS
ST13
INITIALIZE COMMUNICATION DATA
ST14
7
CLEAR RAM AT GAME COMPLETION
ST15
ST16
AUTOMATIC MEDAL INSERTION REQUEST EXISTS?
NO
YES
ST17
INSERT REQUESTED NUMBER OF MEDALS AUTOMATICALLY
ST19
MEDAL INSERTED?
NO
YES
ST18
TRANSMIT A MEDAL INSERTION COMMAND
ST20
NO
START LEVER IS ON?
YES
2

FIG.22

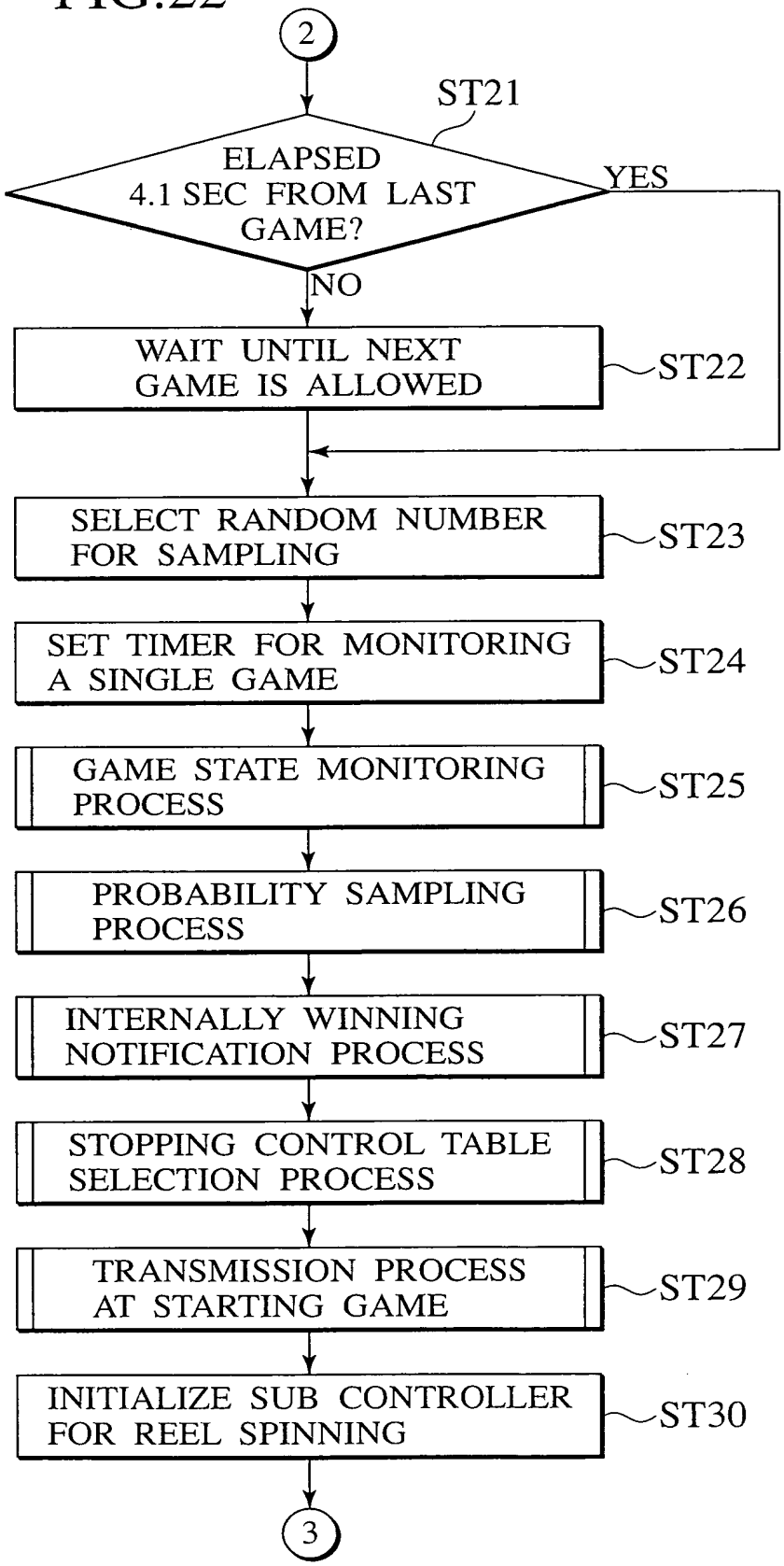
2
ST21
ELAPSED 4.1 SEC FROM LAST GAME?
YES
NO
WAIT UNTIL NEXT GAME IS ALLOWED
ST22
SELECT RANDOM NUMBER FOR SAMPLING
ST23
SET TIMER FOR MONITORING A SINGLE GAME
ST24
GAME STATE MONITORING PROCESS
ST25
PROBABILITY SAMPLING PROCESS
ST26
INTERNALLY WINNING NOTIFICATION PROCESS
ST27
STOPPING CONTROL TABLE SELECTION PROCESS
ST28
TRANSMISSION PROCESS AT STARTING GAME
ST29
INITIALIZE SUB CONTROLLER FOR REEL SPINNING
ST30
3

FIG.23

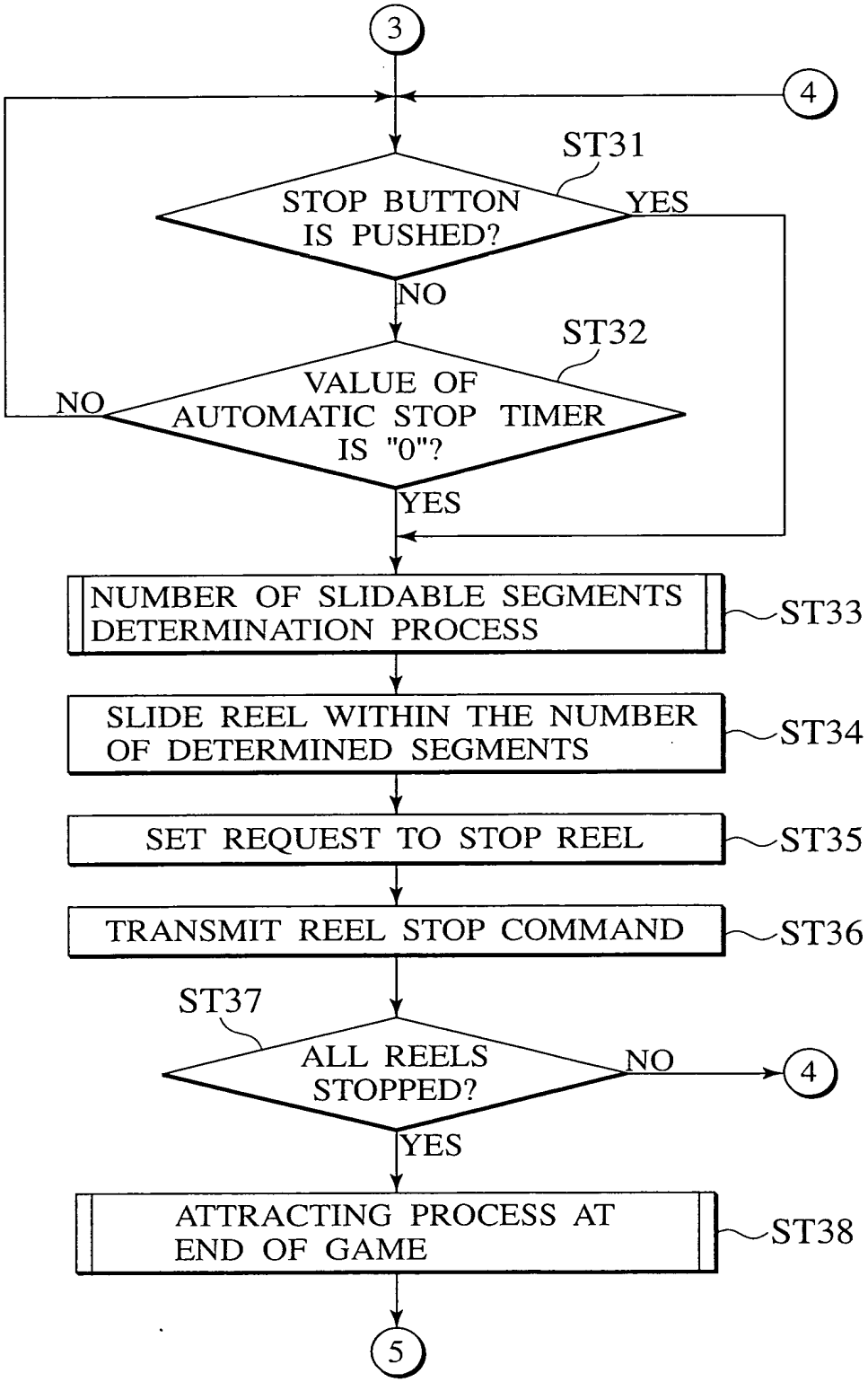
3
4
ST31
STOP BUTTON IS PUSHED?
YES
NO
ST32
VALUE OF AUTOMATIC STOP TIMER IS "0"?
NO
YES
NUMBER OF SLIDABLE SEGMENTS DETERMINATION PROCESS
ST33
SLIDE REEL WITHIN THE NUMBER OF DETERMINED SEGMENTS
ST34
SET REQUEST TO STOP REEL
ST35
TRANSMIT REEL STOP COMMAND
ST36
ST37
ALL REELS STOPPED?
NO
4
YES
ATTRACTING PROCESS AT END OF GAME
ST38
5

FIG.24

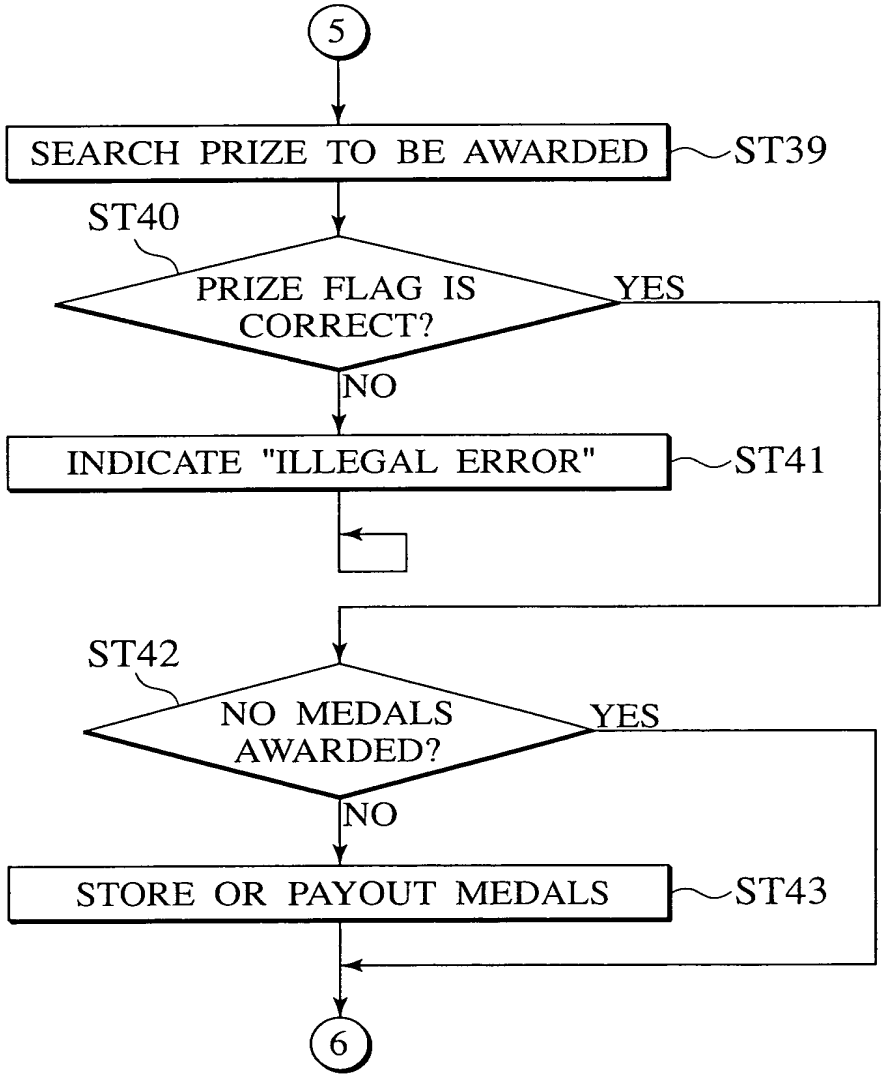
5
SEARCH PRIZE TO BE AWARDED
ST39
ST40
PRIZE FLAG IS CORRECT?
YES
NO
INDICATE "ILLEGAL ERROR"
ST41
ST42
NO MEDALS AWARDED?
YES
NO
STORE OR PAYOUT MEDALS
ST43
6

FIG.25

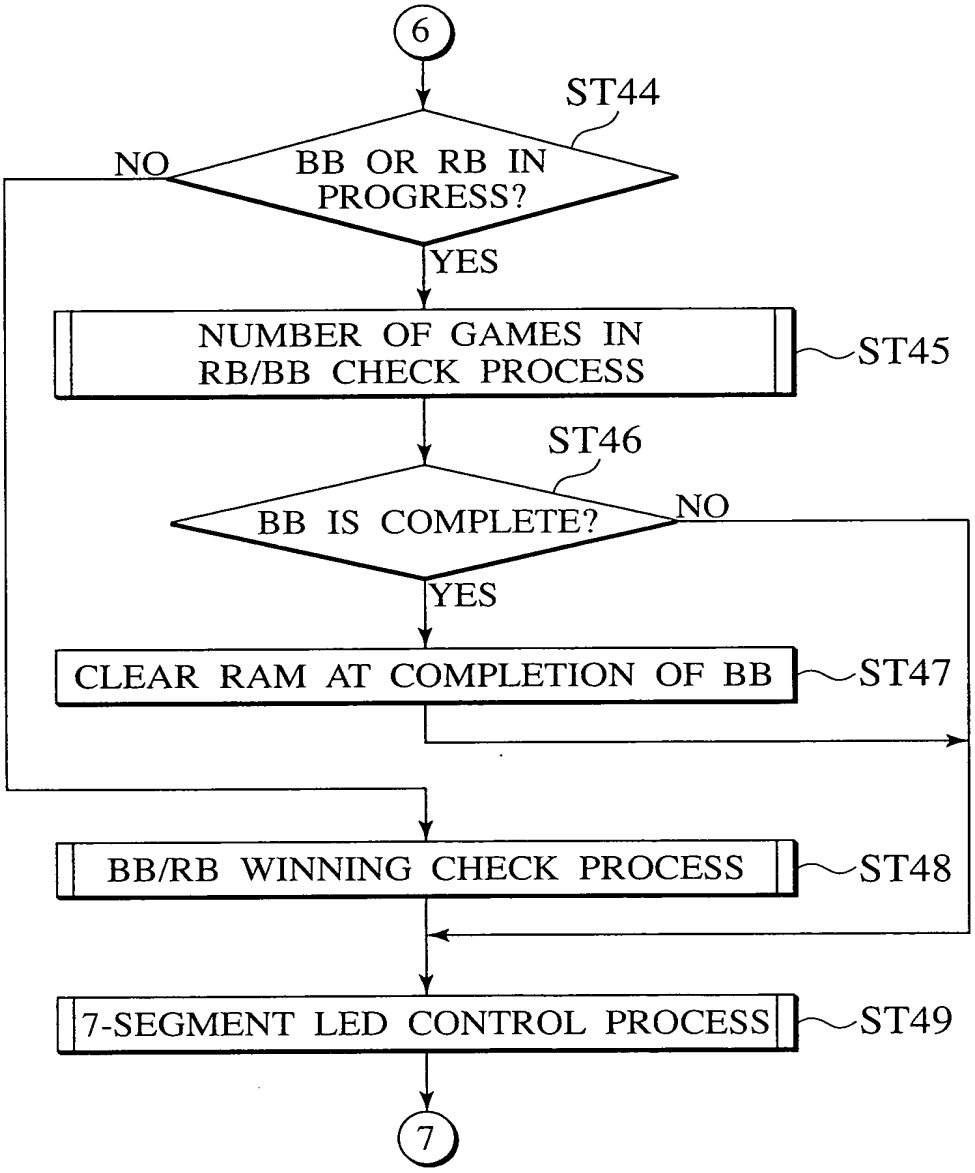
6
ST44
BB OR RB IN PROGRESS?
NO
YES
NUMBER OF GAMES IN RB/BB CHECK PROCESS
ST45
ST46
BB IS COMPLETE?
NO
YES
CLEAR RAM AT COMPLETION OF BB
ST47
BB/RB WINNING CHECK PROCESS
ST48
7-SEGMENT LED CONTROL PROCESS
ST49
7

FIG.26

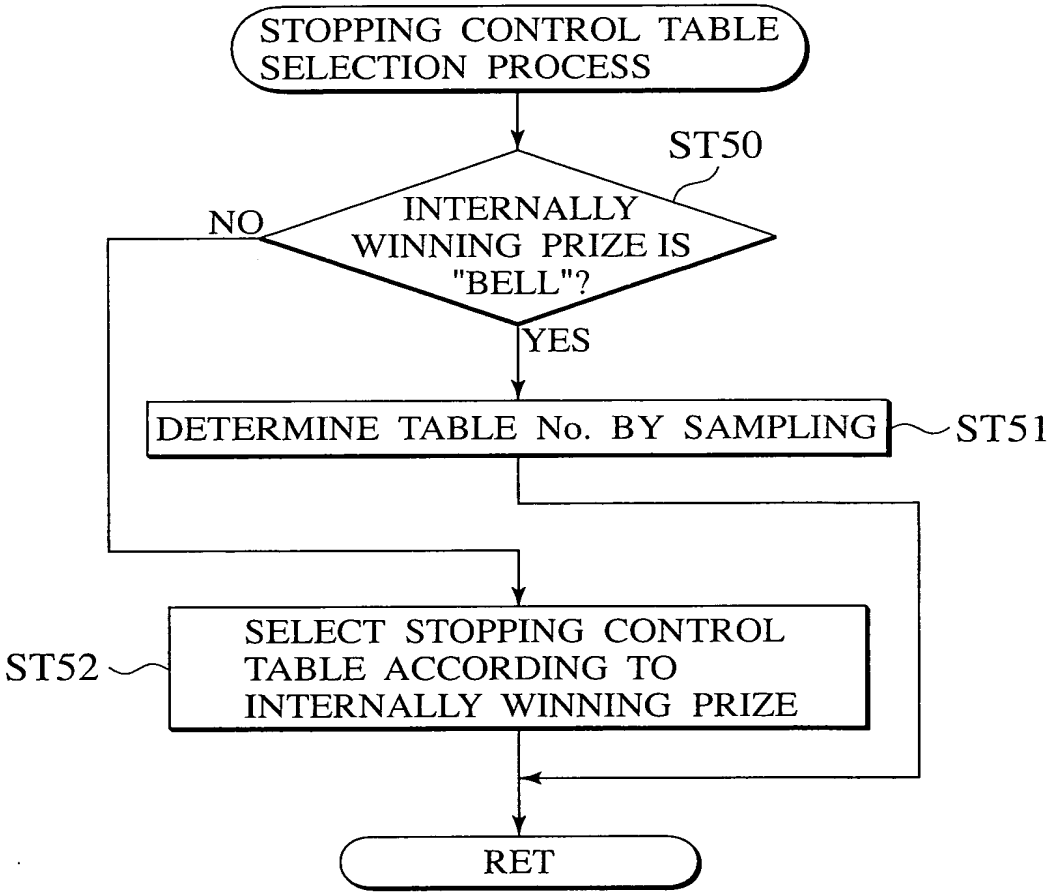
STOPPING CONTROL TABLE SELECTION PROCESS
ST50
INTERNALLY WINNING PRIZE IS "BELL"?
NO
YES
DETERMINE TABLE No. BY SAMPLING
ST51
SELECT STOPPING CONTROL TABLE ACCORDING TO INTERNALLY WINNING PRIZE
ST52
RET

FIG.27

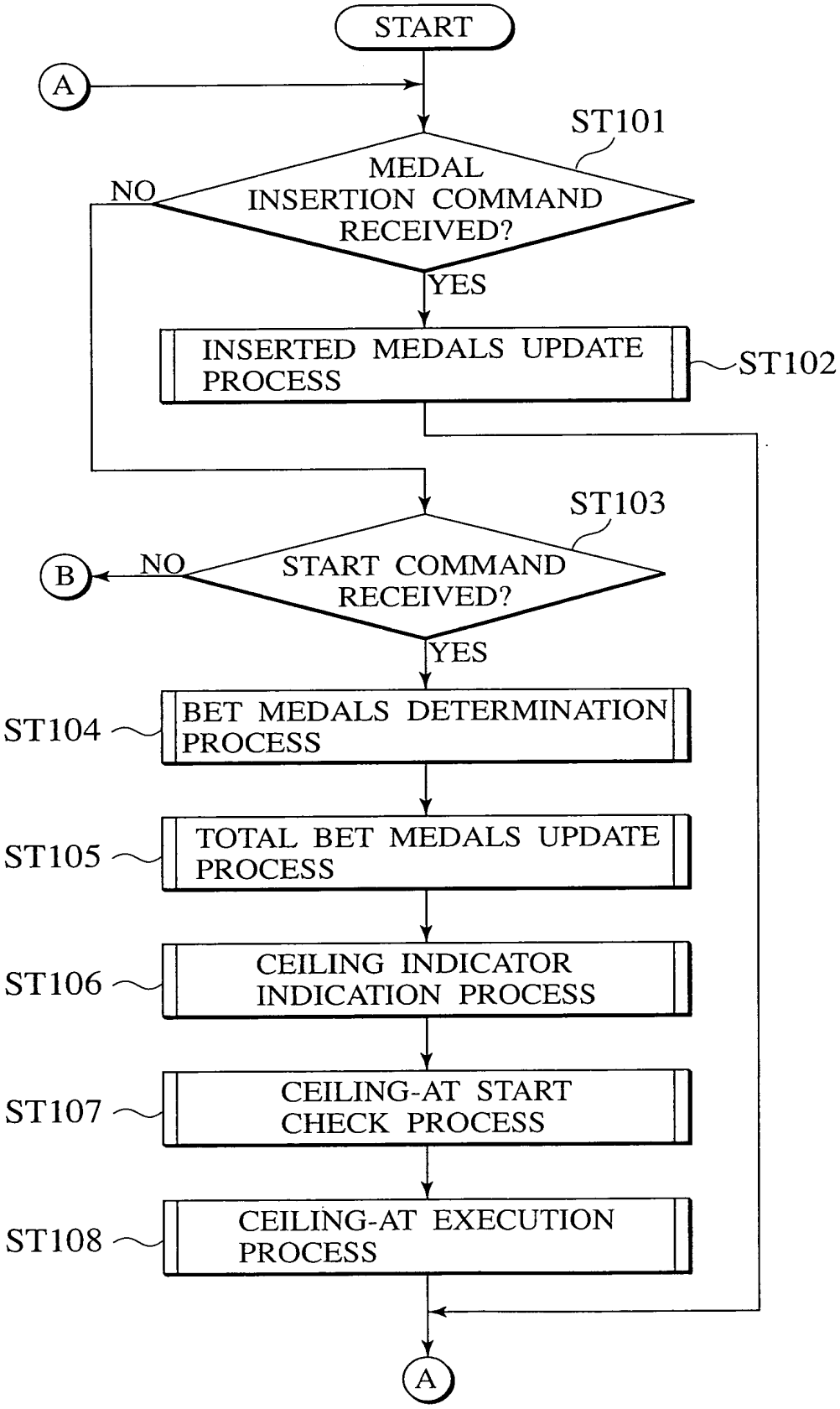
START
A
ST101
MEDAL INSERTION COMMAND RECEIVED?
NO
YES
INSERTED MEDALS UPDATE PROCESS
ST102
ST103
B
NO
START COMMAND RECEIVED?
YES
ST104
BET MEDALS DETERMINATION PROCESS
ST105
TOTAL BET MEDALS UPDATE PROCESS
ST106
CEILING INDICATOR INDICATION PROCESS
ST107
CEILING-AT START CHECK PROCESS
ST108
CEILING-AT EXECUTION PROCESS
A

FIG.28

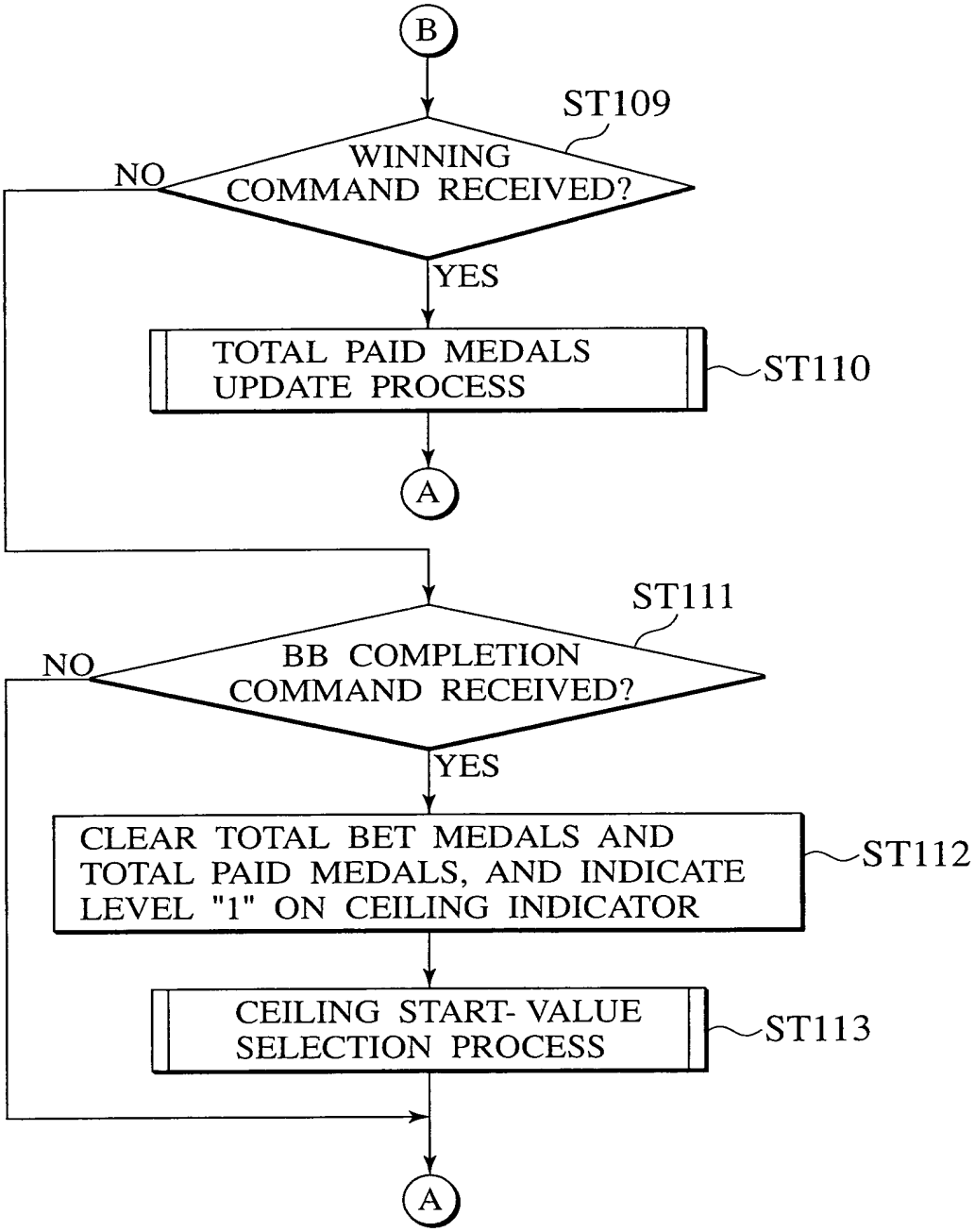
B
ST109
WINNING COMMAND RECEIVED?
NO
YES
TOTAL PAID MEDALS UPDATE PROCESS
ST110
A
ST111
BB COMPLETION COMMAND RECEIVED?
NO
YES
CLEAR TOTAL BET MEDALS AND TOTAL PAID MEDALS, AND INDICATE LEVEL "1" ON CEILING INDICATOR
ST112
CEILING START- VALUE SELECTION PROCESS
ST113
A

FIG.29A

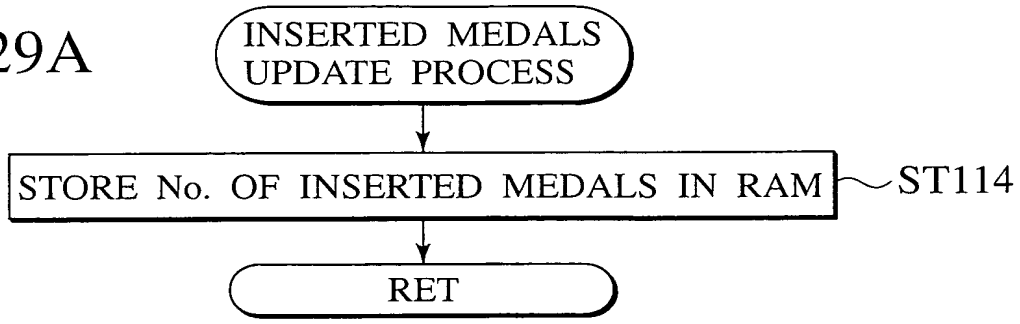

FIG.29B

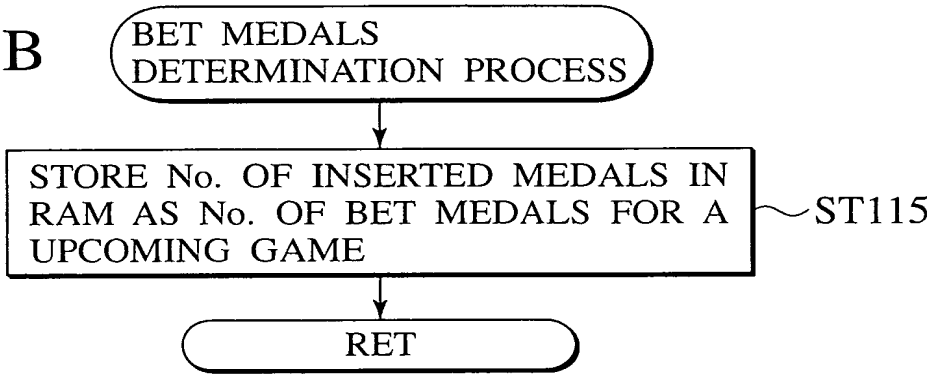

FIG.29C

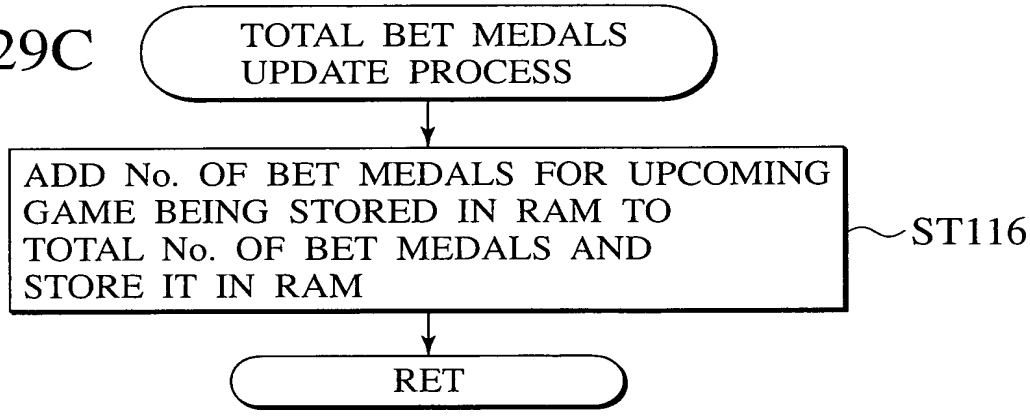

FIG.29D

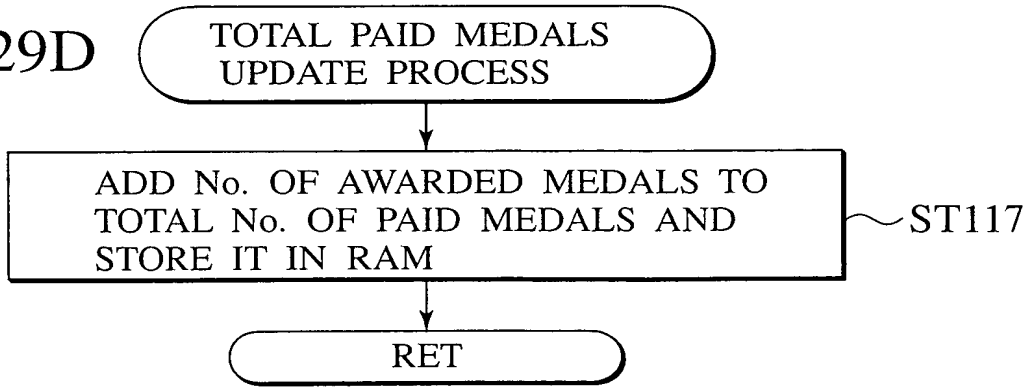

FIG.30

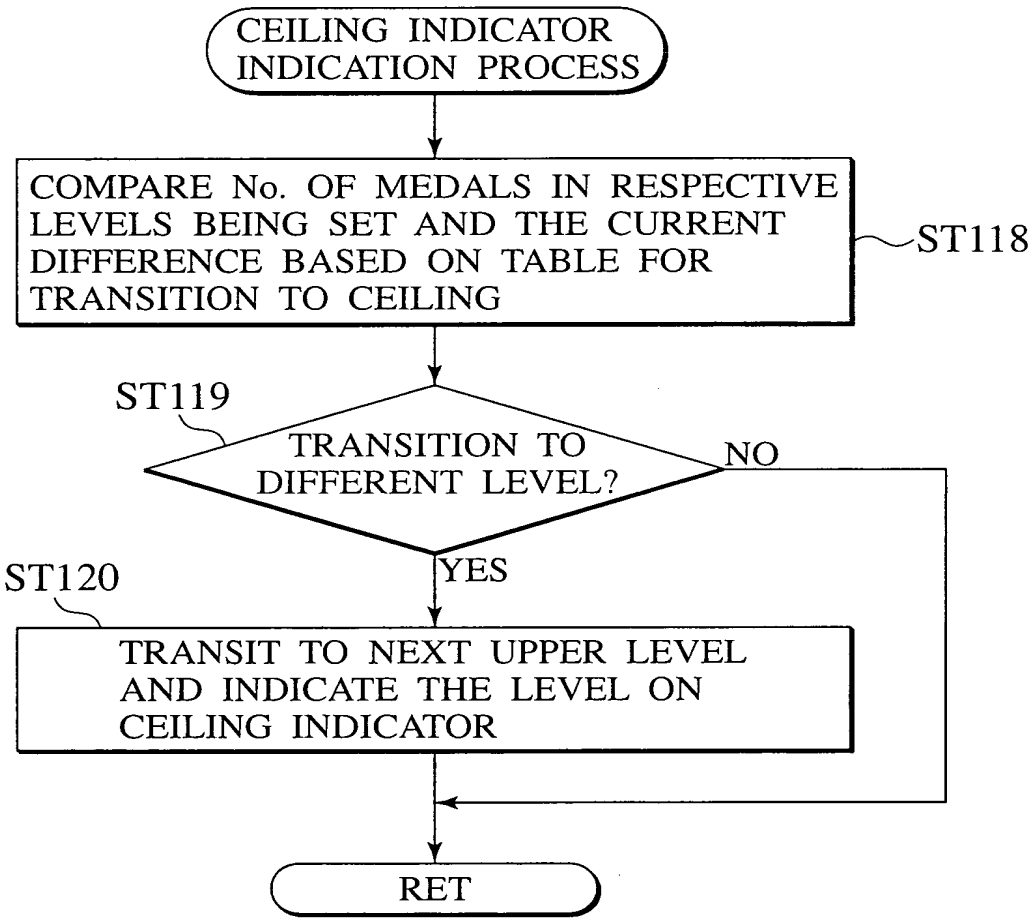
CEILING INDICATOR INDICATION PROCESS
COMPARE No. OF MEDALS IN RESPECTIVE LEVELS BEING SET AND THE CURRENT DIFFERENCE BASED ON TABLE FOR TRANSITION TO CEILING
ST118
ST119
TRANSITION TO DIFFERENT LEVEL?
NO
YES
ST120
TRANSIT TO NEXT UPPER LEVEL AND INDICATE THE LEVEL ON CEILING INDICATOR
RET

FIG.31

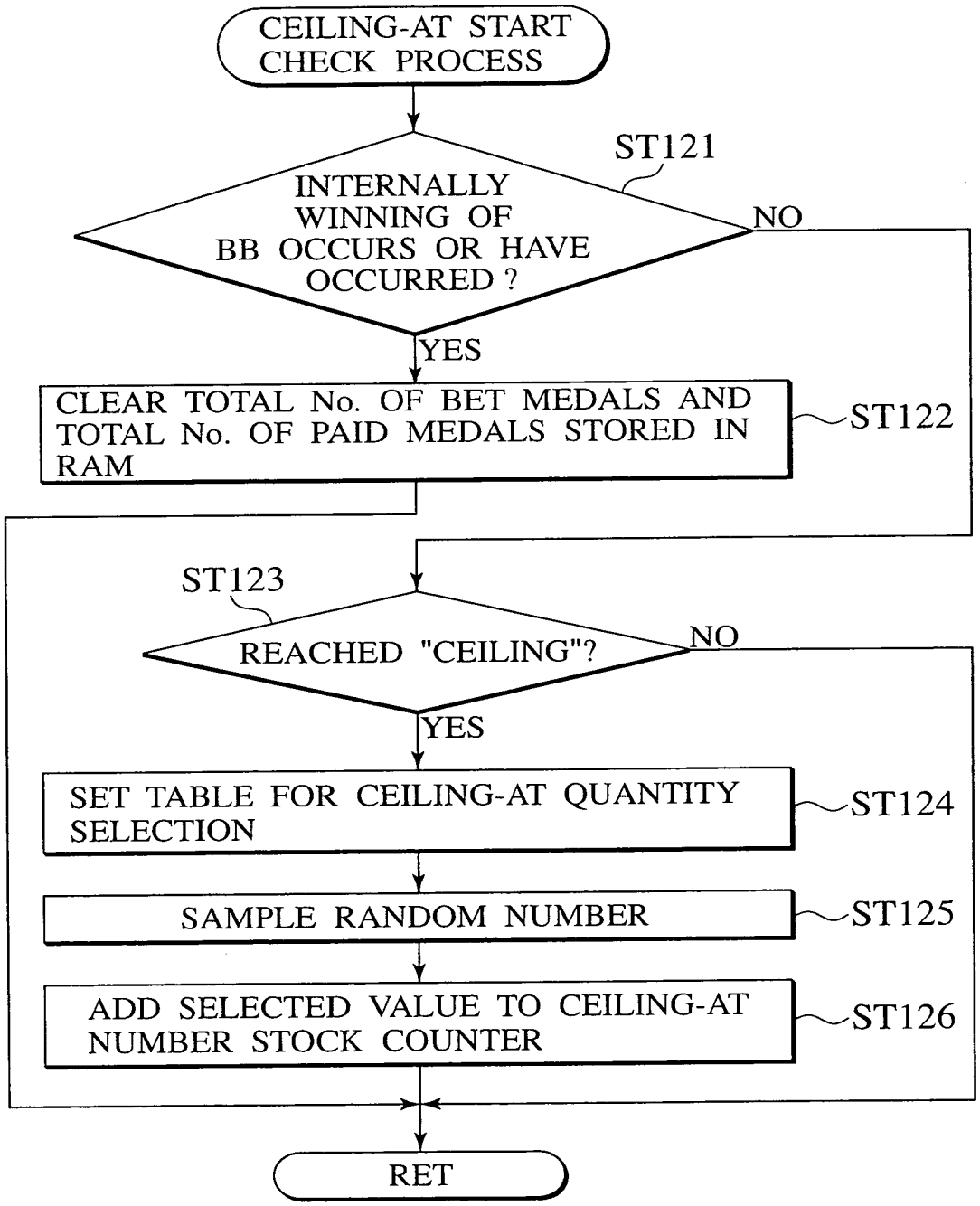
CEILING-AT START CHECK PROCESS
ST121
INTERNALLY WINNING OF BB OCCURS OR HAVE OCCURRED ?
NO
YES
CLEAR TOTAL No. OF BET MEDALS AND TOTAL No. OF PAID MEDALS STORED IN RAM
ST122
ST123
REACHED "CEILING"?
NO
YES
SET TABLE FOR CEILING-AT QUANTITY SELECTION
ST124
SAMPLE RANDOM NUMBER
ST125
ADD SELECTED VALUE TO CEILING-AT NUMBER STOCK COUNTER
ST126
RET

FIG.32

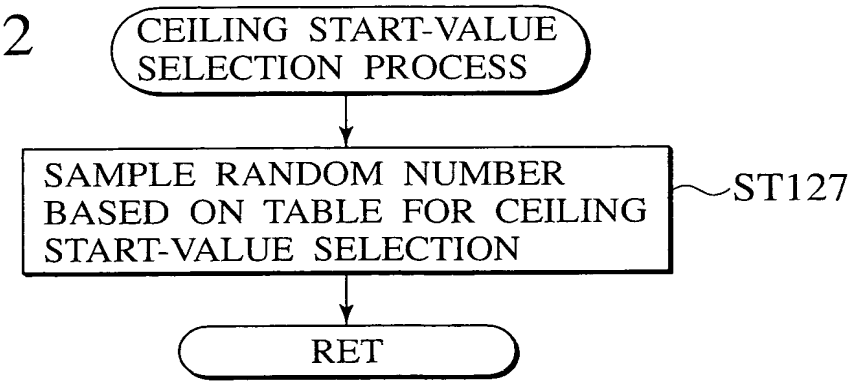
CEILING START-VALUE SELECTION PROCESS
SAMPLE RANDOM NUMBER BASED ON TABLE FOR CEILING START-VALUE SELECTION
ST127
RET

FIG.33

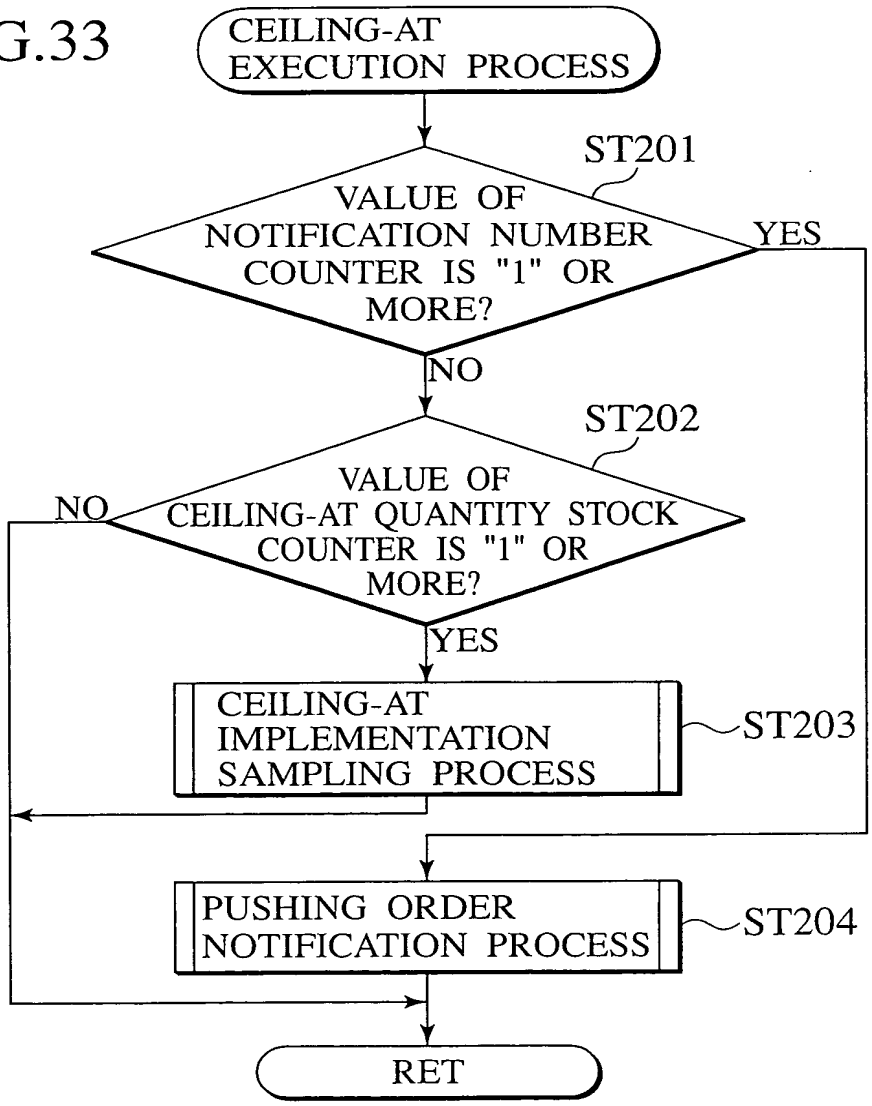
CEILING-AT EXECUTION PROCESS
ST201
VALUE OF NOTIFICATION NUMBER COUNTER IS "1" OR MORE?
YES
NO
ST202
VALUE OF CEILING-AT QUANTITY STOCK COUNTER IS "1" OR MORE?
NO
YES
CEILING-AT IMPLEMENTATION SAMPLING PROCESS
ST203
PUSHING ORDER NOTIFICATION PROCESS
ST204
RET

FIG.34

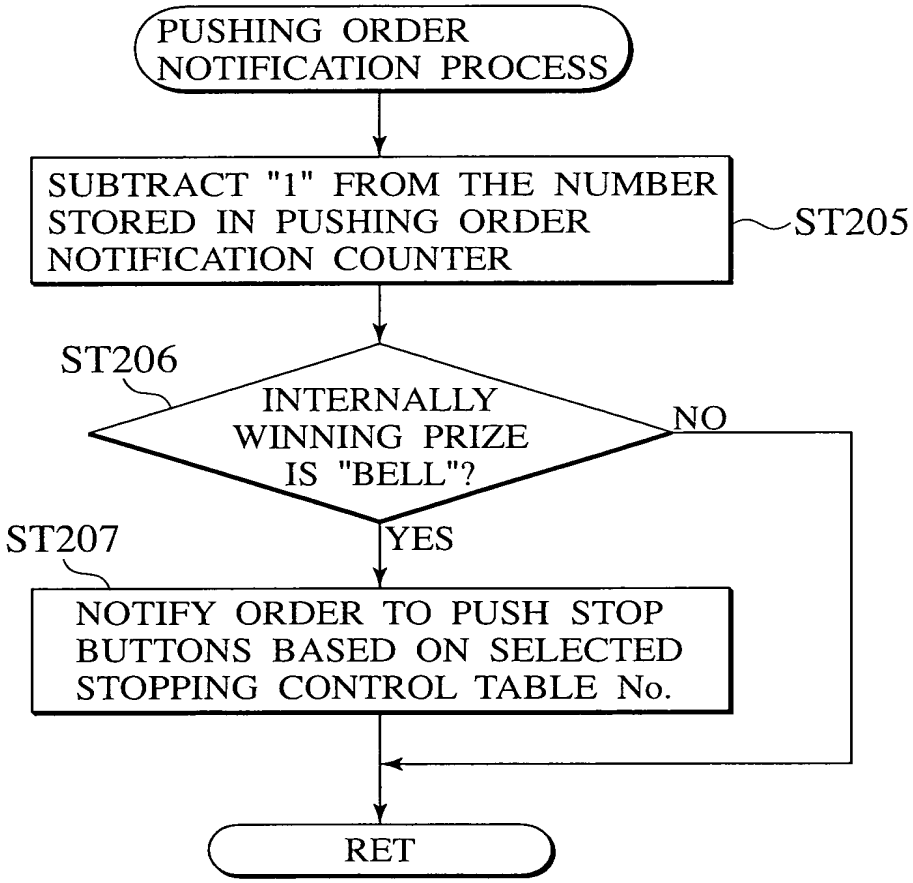
PUSHING ORDER NOTIFICATION PROCESS
SUBTRACT "1" FROM THE NUMBER STORED IN PUSHING ORDER NOTIFICATION COUNTER
ST205
ST206
INTERNALLY WINNING PRIZE IS "BELL"?
NO
YES
ST207
NOTIFY ORDER TO PUSH STOP BUTTONS BASED ON SELECTED STOPPING CONTROL TABLE No.
RET

FIG.35

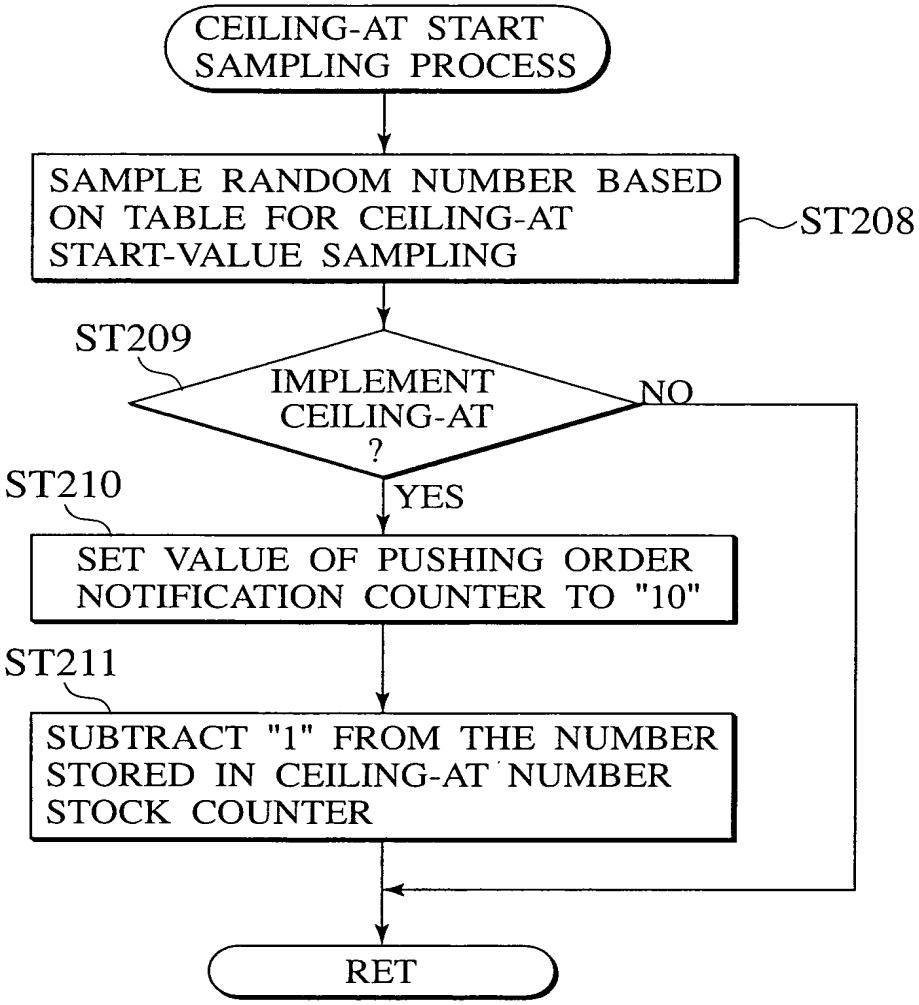
CEILING-AT START SAMPLING PROCESS
SAMPLE RANDOM NUMBER BASED ON TABLE FOR CEILING-AT START-VALUE SAMPLING
ST208
ST209
IMPLEMENT CEILING-AT ?
NO
YES
ST210
SET VALUE OF PUSHING ORDER NOTIFICATION COUNTER TO "10"
ST211
SUBTRACT "1" FROM THE NUMBER STORED IN CEILING-AT NUMBER STOCK COUNTER
RET

FIG.36

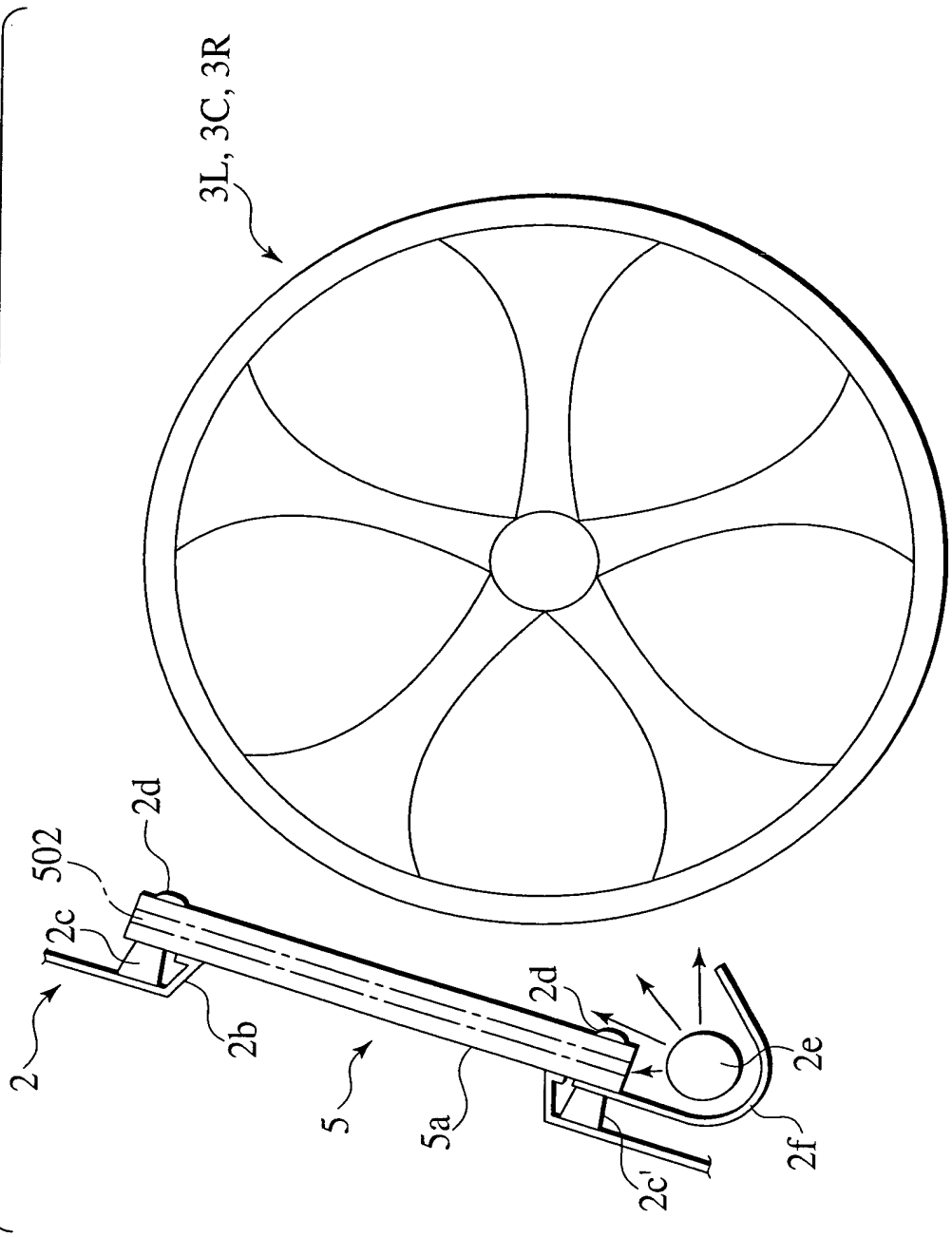

FIG.37

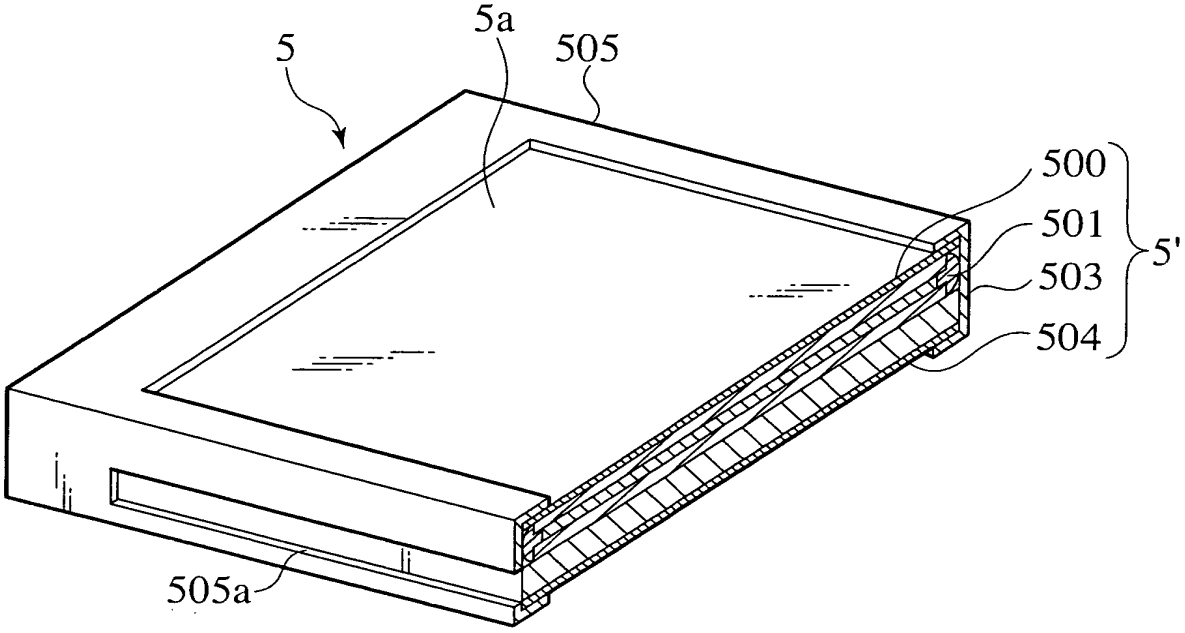
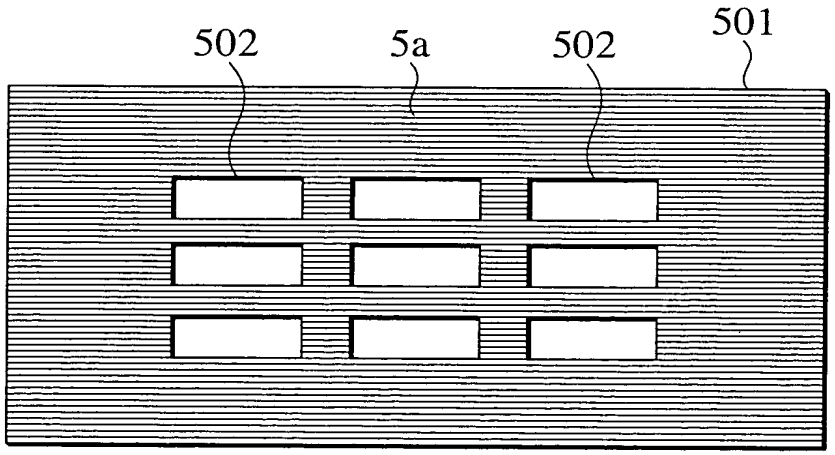
FIG.38